UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/556,652	11/16/2006	Klaus Forstner	HKH-23PCT	8501

40570 7590 04/03/2009

FRIEDRICH KUEFFNER
317 MADISON AVENUE, SUITE 910
NEW YORK, NY 10017

EXAMINER	
BERHANU, ETSUB D	
ART UNIT	PAPER NUMBER
3768	

MAIL DATE	DELIVERY MODE
04/03/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/556,652	FORSTNER, KLAUS	
	Examiner	Art Unit	
	ETSUB D. BERHANU	3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 November 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/12/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 17-19 are objected to because of the following informalities: it is believed, according to the Specification, that the wavelengths disclosed in claims 17-19 are to be in nanometers, not micrometers. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim(s) must be in one sentence form only. Note the format of the claims in the patent(s) cited. Claim 1 contains multiple sentences. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 13 recites the broad recitation “at least one light source”, and the claim also recites “wherein at least

three light sources (1, 2, 3) are used" which is the narrower statement of the range/limitation. Claim 4 recites the limitation "the logarithmized measured values" in line 3. There is insufficient antecedent basis for this recitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-9, 11 and 13-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Chance'417 (USPN 5,564,417).

Figure 1 of Chance'417 discloses a device for measuring oxygen saturation, the device comprising: three light emitting diodes 22a,22b,22c emitting wavelengths of about 660nm, 805nm and 950nm; three photodiodes 24a,24b,24c; and an arithmetic unit capable of taking logarithms and performing divisions, multiplications, additions and subtractions (see description of Figure 1 and col. 7, line 10 – col. 8, line 15). The device is used to measure oxygen saturation, which is a measure of oxygenated hemoglobin in the blood divided by the total hemoglobin concentration of the blood, by successively generating wavelengths from each light emitting diode and conducting a measuring signal of the photodiodes to the arithmetic unit (see SUMMARY OF INVENTION). The arithmetic unit considers a quotient of logarithmized measured values when determining the oxygen saturation. The device is also used to measure myoglobin concentrations (col. 4, lines 47-49).

6. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Al-Ali et al.'065 (USPN 6,334,065).

Al-Ali et al.'065 discloses a method for measuring arterial oxygen saturation (see ABSTRACT), the method comprising: generating light signals of a first wavelength at two successive times from a first light source, generating light signals of a second wavelength at two successive times from a second light source and generating light signals of a third wavelength at two successive times from a third light source, receiving the generated light at a photodiode once the generated light has been attenuated by human tissue, and conducting the measured signal from the photodiode to an evaluation unit, wherein the evaluation unit uses a quotient of logarithmized measured values to determine the arterial oxygen saturation measurement (see description of Figures 1A, 1B and col. 7, line 56 – col. 8, line 22). Arterial oxygen saturation is the percentage concentration of oxygenated hemoglobin divided by the total concentration of hemoglobin (col. 6, lines 63-66).

7. Claims 1, 6, 7, 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Benaron'745 (USPN 5,337,745).

Benaron'745 discloses a method for measuring a concentration of bilirubin (col. 1, lines 11-17), the method comprising: generating light signals of a first wavelength at two successive times from a first light source, generating light signals of a second wavelength at two successive times from a second light source, generating light signals of a third wavelength at two successive times from a third light source, receiving the generated light at a photodiode once the generated light has been attenuated by human tissue, and conducting the measured signal from the photodiode to an evaluation unit (see ABSTRACT and col. 3, line 50 - col. 5, line 26).

8. Claims 1-4, 6, 7, 9, 12, 13 and 15-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Aoyagi et al.'125 (USPN 5,766,125).

Figure 1 of Aoyagi et al.'125 discloses a device for measuring blood components, the device comprising: three light sources 1,2,3 emitting wavelengths of about 660nm, 805nm and 950nm; a photodiode 6; and an arithmetic unit 13 for taking logarithms and for performing divisions,

multiplications, additions and subtractions (see BACKGROUND OF THE INVENTION and description of Figure 1). The device is used to determine the concentration of administered dyes (col. 1, lines 8-12) by successively generating wavelengths from each light source and conducting a measuring signal of the photodiodes to the arithmetic unit. The arithmetic unit considers a quotient of logarithmized measured values when determining the dye concentration.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kobayashi et al.'748 (cited by Applicant) and CRITICARE'099 (cited by Applicant) each disclose a device for measuring blood components wherein the device comprises at least three light sources, a photodiode and an arithmetic unit for taking logarithms. Bernreuter'589 (USPN 5,772,589) discloses a device for measuring blood components, the device comprising at least one source which generates light of three wavelengths, a photodiode and an arithmetic unit capable of evaluating quotients of logarithmized values and performing additions, subtractions and multiplications.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ETSUB D. BERHANU whose telephone number is (571)272-6563. The examiner can normally be reached on Monday - Friday (7:00 - 3:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on (571)272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eric F Winakur/
Primary Examiner, Art Unit 3768

EDB